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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,283	09/24/2003	Manfred Wiedemer	P03,0328	6592

26574 7590 07/06/2005
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EXAMINER

DICHT, RACHEL S

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/669,283

Applicant(s)

WIEDEMER, MANFRED

Examiner

Rachel Dicht

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/24/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/24/2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/24/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - Print element labeled as 24, should be numbered 34; and
 - Switch labeled as 59, should be numbered as 58.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Wiedemer (DE 31 36 427 C2).

In regard to:

Claim 1:

Wiedemer (DE 31 36 427 C2) teaches a printing device to transfer ink onto a recording medium, comprising: a carrier (32, Fig. 1), and a plurality of print elements (10 and 12, Fig. 1) arranged on said carrier (32, Fig. 1) in at least one linear row (Fig. 3), each print element having two high voltage electrodes (10 and 12, Fig. 1 and Fig. 2) and a high voltage supply (refer to page 8, first paragraph of

translation) connected to said high voltage electrode to selectively supply a high voltage to at least one print element so that a spark discharge ensues whose shock impulse transfers ink from said carrier (32, Fig. 1) onto the recording medium.

Claim 3:

Wiedemer (DE 31 36 427 C2) teaches a printing device wherein said two high voltage electrodes of said print elements includes a first electrode shaped as a ring electrode (10, Fig. 2).

Claim 14:

Wiedemer (DE 31 36 427 C2) teaches a method to transfer ink onto a recording medium comprising the steps of providing a plurality of print elements (12, Fig. 3) on a carrier (32, Fig. 3) in at least one linear row (Fig. 3), providing each print element with two high voltage electrodes (10 and 12, Fig. 1), and selectively supplying high voltage to at least one of said print elements (refer to page 8, first paragraph of translation) so that a spark discharge is released whose shock impulse transfers ink from said carrier onto the recording medium.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wiedemer (European Pat. No. DE 31 36 427 C2) in view of Mould et al. (European Pat. No. EP 0 933 214 A2).

The device of Wiedemer (European Pat. No. DE 31 36 427 C2) DIFFERS from claim 4 in that it fails to teach a printing device wherein said two high voltage electrodes of said print elements includes a first electrode shaped as a circular area.

However, Mould et al. teaches a printing device wherein said two high voltage electrodes of said print elements includes a first electrode shaped as a circular area (11, fig. 4).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Wiedemer (European Pat. No. DE 31 36 427 C2) to include an electrode shaped as a ring

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as taught by Mould et al. for the purpose of directing ink towards a substrate accurately.

6. Claims 5, 6, 8, 10, 13, 15, 16, 18, 22, and 24 are rejected under 35 U.S.C. 103(a) as being obvious over Wiedemer (European Pat. No. DE 31 36 427 C2) in view of Wiedemer (European Pat. No. EP 0 756 544 B1).

In regard to:

Claims 5 and 15:

The device of Wiedemer (DE 31 36 427 C2) DIFFERS from claim 5 in that it fails to teach a printing device wherein said carrier defines at least one cup-like pit adapted to accept ink for each of said print elements.

However the device of Wiedemer (EP 0 756 544 B1) teaches a printing device wherein said carrier (23, Fig. 5) defines at least one cup-like pit (30, Fig. 5) adapted to accept ink for each of said print elements (30, Fig. 5) (refer to page 12, second paragraph of translation).

Claims 6 and 16:

The device of Wiedemer (DE 31 36 427 C2) DIFFERS from claim 6 in that it fails to teach a printing device wherein said at least one cup-like pit has a diameter in the range of 10 to 50 μm .

However, Wiedemer (EP 0 756 544 B1) teaches a printing device wherein said at least one cup-like pit has a diameter in the range of 10 to 50 μm (refer to page 12, third paragraph of translation).

Claims 7 and 17:

The device of Wiedemer (DE 31 36 427 C2) DIFFERS from claims 7 and 17 in that it fails to teach a method wherein said cup-like pit has a depth in the range of 0.1 to 50 μm .

However, based on Fig. 5 given in Wiedemer (EP 0 756 544 B1), it can be reasonably stated that the diameter and the depth of print element 30 are similar in size. Since the diameter is disclosed as 10 – 50 μm the drawing indicated the depth to be within that range as well.

Claims 8 and 18:

The device of Wiedemer (DE 31 36 427 C2) DIFFERS from claim 8 in that it fails to teach a printing device wherein said at least one linear row of print elements includes a plurality of rows of print elements arranged in a matrix.

However, Wiedemer (EP 0 756 544 B1) teaches a printing device wherein said at least one linear row of print elements includes a plurality of rows of print

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elements arranged in a matrix (Fig. 3) (refer to page 12, second paragraph of translation).

Claim 10:

The device of Wiedemer (DE 31 36 427 C2) DIFFERS from claim 10 in that it fails to teach a printing device wherein separation of said print elements from one another in said matrix is determined dependent on a desired print resolution.

However, Wiedemer (EP 0 756 544 B1) teaches a printing device wherein separation of said print elements from one another in said matrix is determined dependent on a desired print resolution (refer to page 12, third paragraph of translation).

Claims 13 and 22:

The device of Wiedemer (DE 31 36 427 C2) DIFFERS from claim 13 in that it fails to teach a printing device wherein said carrier is a print roller.

However, Wiedemer (EP 0 756 544 B1) teaches a printing device wherein said carrier is a print roller (23, Fig. 5 and 10, Fig. 2 and 5).

Claim 24:

The device of Wiedemer (DE 31 36 427 C2) DIFFERS from claim 24 in that it fails to teach a method further comprising the step of transferring the ink into an intermediate carrier before transferring the ink from the intermediate carrier onto the recording medium.

However, Wiedemer (EP 0 756 544 B1) teaches a method further comprising the step of transferring the ink into an intermediate carrier (12, Fig. 1) before transferring the ink from the intermediate carrier onto the recording medium (refer to page 11, first paragraph of translation).

Therefore, in regard to claims 5 and 15, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Wiedemer (DE 31 36 427 C2) to include a cup-like pit as taught by Wiedemer (EP 0 756 544 B1) for the purpose of increasing picture quality and having any desired printing resolution.

Allowable Subject Matter

7. Claims 2, 9, 11, 12, 19, 20, 21, and 23 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Contact Information

Any inquiry concerning this communication from the examiner should be directed to Rachel Dicht whose telephone number is 571-272-8544. The examiner can normally be reached on 7:00 am - 3:30 pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RSD



June 15, 2005



Stephen D. Meier
Primary Examiner